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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/807,208 | 04/11/2001 | Takahiro Yoshida | 016886/0183 | 4216 |

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| EXAMINER | |
|---|---|
| TIV, BACKHEAN | |
| **ART UNIT** | **PAPER NUMBER** |
| 2151 | |

DATE MAILED: 04/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/807,208 | YOSHIDA ET AL. | |
| | Examiner | Art Unit | |
| | Backhean Tiv | 2151 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *03 February 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *20-22 and 30-32* is/are pending in the application.

4a) Of the above claim(s) *1-19,23-29,33-38* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## *Detailed Action*

Claims 20-22,30-32 are pending in this application. Claims 1-19 have been cancelled. Claims 23-29, 33-38 have been withdrawn from consideration. This is a response to the RCE filed on 2/3/06.

## *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 21 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 21 recites the limitation "the OSI layer". There is insufficient antecedent basis for this limitation in the claim. There is an OSI layer 2 but not an OSI layer.

## *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 20,21,30,31 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,502,131 issued to Vaid et al.(Valid) in view of US Patent 6,594,228 issued to Naidoo et al.(Naidoo).

As per claim 20,21,30,31 Valid teaches a system for performing a maintenance test between LAN connecting devices in which a plurality of LAN connecting devices that are connectable to a LAN configured(Fig.4) such that communication is possible between the LAN connecting devices using an optical signal of a first input / output wavelength for performing ordinary LAN communication and an optical signal of a second input / output wavelength for maintenance communication relating to communication on said circuit connecting the LAN connecting devices to each other(Abstract), wherein one of said LAN connecting devices comprises: an optical multiplexer for collecting the optical signal of said first input / output wavelength and an optical signal of said second input / output wavelength and transmitting them to said circuit(Fig.11; col.6, lines 40-57, col.7, lines 7-25; teaches the use of Ethernet LAN, Ethernet uses fiber optic); a first communication data control part for performing ordinary LAN communication processing and outputting the optical signal of the first input / output wavelength outputted by the LAN communication processing to said optical multiplexer(Fig.11; col.6, lines 40-57, col.7, lines 7-25); and a first maintenance data control part for outputting a maintenance signal for performing maintenance test processing of communication to said optical multiplexer as the optical signal of the second input / output wavelength(col.10, lines 50-67), and wherein the other of said LAN connecting devices comprises: an optical demultiplexer for separating the optical signal transmitted by said circuit to said first input / output wavelength and said second input / output wavelength and outputting each of them(Fig.11); a second communication data control part for performing the ordinary LAN communication processing by the

optical signal of the first input / output wavelength outputted by said optical demultiplexer(Figs.1-19,col.6, lines 40-col.7, lines 67); and a second maintenance data control part for performing said maintenance test processing of communication by the optical signal of the second input / output wavelength outputted by said optical demultiplexer, wherein the maintenance test is performed on a path between said LAN connecting devices (Figs.1-19,col.6, lines 40-col.7, lines 67); and a first maintenance data control part for performing failure monitoring processing and outputting alarm information obtained by the failure monitoring processing to said optical multiplexer as the optical signal of the second input / output wavelength(Fig.9); wherein a maintenance test is performed for a connection path with said opposite party LAN connecting device(Figs.1-21).

Vaid however does not explicitly teaches the testing of the OSI layer 2 frame.

Naidoo teaches the testing of the OSI layer 2 frame(Abstract, col.3, lines 4-19, col.4, lines 38-51; Naidoo teaches the testing of data link Layer 2 and whether a back up data link should be used. Data-link is a commonly used term for OSI layer 2 as supported by US Patent 6,078,963 issued to Civanlar et al., col.4, lines 12-15 and Webopedia: The 7 Layers of the OSI Model).

Therefore it would have been obvious to one ordinary skill in the art at the time of the invention to modify the teachings of Vaid to explicitly use the testing of OSI layer 2 frame as taught by Naidoo in order to improve signaling performance reliability of interfaces controlled by data links(Naidoo, col.1, lines 5-10).

One ordinary skill in the art would have been motivated to combine the teachings of Vaid and Naidoo in order to provide a system to improve signaling performance reliability of interfaces controlled by data links(Naidoo, col.1, lines 5-10).

Claims 22,32 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,502,131 issued to Vaid et al.(Valid) in view of US Patent 6,594,228 issued to Naidoo et al.(Naidoo).in further view of US Patent 6,591,368 issued to Ryu.

As per claim 22, 32, Vida teaches a system for performing a maintenance test between LAN connecting devices in which a plurality of LAN connecting devices(Fig.4) that are connectable to a LAN and that are capable of such that communication is possible between the LAN connecting devices using an optical signal of a first input / output wavelength for performing ordinary LAN communication and an optical signal of a second input / output wavelength for notifying a state of the LAN connecting device on said circuit connecting the LAN connecting devices to each other(Abstract, Figs.1-21), wherein one of said LAN connecting devices comprises: an optical multiplexer for collecting the optical signal of said first input / output wavelength and an optical signal of said second input / output wavelength and transmitting them to said circuit(Fig.11; col.6, lines 40-57, col.7, lines 7-25; teaches the use of Ethernet LAN, Ethernet uses fiber optic); a first communication data control part for performing ordinary LAN communication processing and outputting the optical signal of the first input / output wavelength outputted by the ordinary LAN communication processing to said optical multiplexer(Fig.11; col.6, lines 40-57, col.7, lines 7-25); an optical demultiplexer for

separating the optical signal transmitted by said circuit to said first input / output wavelength and said second input / output wavelength and outputting each of them(Figs.1-21, col.10, lines 50-67); a second communication data control part for performing the ordinary LAN communication processing by the optical signal of the first input / output wavelength outputted by said optical demultiplexer(Figs.1-21, col.10, lines 50-67); wherein transmission of said power-off signal from one of said LAN connecting devices to the other of said LAN connecting devices is performed by the signal(Figs.1-21).

Vaid however does not explicitly teaches the testing of the OSI layer 2 frame.

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Naidoo teaches the testing of the OSI layer 2 frame(Abstract, col.3, lines 4-19, col.4, lines 38-51; Naidoo teaches the testing of data link Layer 2 and whether a back up data link should be used. Data-link is a commonly used term for OSI layer 2 as supported by US Patent 6,078,963 issued to Civanlar et al., col.4, lines 12-15 and Webopedia: The 7 Layers of the OSI Model).

Therefore it would have been obvious to one ordinary skill in the art at the time of the invention to modify the teachings of Vaid to explicitly use the testing of OSI layer 2 frame as taught by Naidoo in order to improve signaling performance reliability of interfaces controlled by data links(Naidoo, col.1, lines 5-10).

One ordinary skill in the art would have been motivated to combine the teachings of Vaid and Naidoo in order to provide a system to improve signaling performance reliability of interfaces controlled by data links(Naidoo, col.1, lines 5-10).

Vaid in view of Naidoo does not explicitly teach LAN connecting device, when it comes into a power-off state, delivering a signal indicating the power-off state to said opposite party device of said status communication; maintenance data control part for recognizing the power-off of one of said LAN connecting devices.

Ryu teaches LAN connecting device, when it comes into a power-off state, delivering a signal indicating the power-off state to said opposite party device of said status communication; maintenance data control part for recognizing the power-off of one of said LAN connecting devices (Fig.1, col.5, lines 23-33).

Therefore it would have been obvious to one ordinary skilled in the art at the time of the invention to modify the teachings of Vaid in view of Naidoo to include indicating that a device is in a power off state as taught by Ryu in order to check the state of device(Ryu, col.1, line 44-col.2, line 34).

One ordinary skilled in the art would have been motivated to combine Vaid, Naidoo, and Ryu to provide a system to have to turn on/off for a device(Ryu, col.1, lines 18-21).

### *Response to Arguments*

Applicant's arguments with respect to claims 20-22, 30-32 have been considered but are moot in view of the new ground(s) of rejection.

### *Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

US Patent 6,078,963 issued to Civanlar et al, Abstract

US Patent 5,732,213 issued to Gessel et al. Abstract

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Backhean Tiv whose telephone number is (571)272-3941. The examiner can normally be reached on 9 A.M.-12 P.M. and 1 -6 P.M. Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zarni Maung can be reached on (571) 272-3939. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Backhean Tiv
2151
4/6/06

ZARNI MAUNG
SUPERVISORY PATENT EXAMINER